







**Name of RIG/Centre :**  
**Food Process &  
Engineering Research  
Group (FOPERG)**

**CoRe : Frontier Materials & Industrial  
Applications**

**Faculty : Faculty of Chemical Engineering**

**Universiti Teknologi MARA**

# Background of Members

	Name of Leader & Members	Faculty & Staff No.	Qualification	Area of Expertise
	<i>Dr Siti Noor Suzila bt Maqsood ul Haque</i>	Faculty of Chemical Engineering	PhD	Food Engineering
	<i>Ummi Kalthum bt Ibrahim</i>	Faculty of Chemical Engineering	Master	Food Engineering
	<i>Nurul Asyikin Md Zaki</i>	Faculty of Chemical Engineering	Master	Food Engineering
	<i>Habsah Alwi</i>	Faculty of Chemical Engineering	Master	Bioprocess Engineering
	<i>Siti Fatma bt Abd Karim</i>	Faculty of Chemical Engineering	Master	Bioprocess Engineering
	<i>Dr Nor Khaizan Bt Anuar</i>	Faculty of Chemical Engineering	PhD	Pharmaceutics





# Research grants

BIL	NAMA PENYELIDIK UTAMA	NAMA PROJEK	JENIS	AGENSI PEMBIAYA	STATUS	TARIKH MULA	TARIKH TAMAT	JUMLAH PEMBIAYAAN (RM)
1	UMMI KALTHUM IBRAHIM	DEGRADATION KINETICS OF ANTIOXIDANT AND THEIR IMPACTS ON COLOUR AND MOISTURE CONTENT OF BREAD ENHANCED WITH GARCINIA MANGOSTANA PERICARP POWDER	LESTARI	UITM	AKTIF	2016	2018	20,000
2	UMMI KALTHUM IBRAHIM	EFFECT OF RADIATION HEAT TRANSFER ON THE BREAD SURFACE COLOUR AND ACRYLAMIDE FORMATION DURING BAKING PROCESS	RIF	UITM	TAMAT	2012	2014	32,000
3	NURUL ASYIKIN MD ZAKI	THERMOBIOLOGICAL CHARACTERIZATION OF PINEAPPLE WASTES IN VACUUM-SYNERGISED MICROWAVE EXTRACTION	LESTARI	UITM	AKTIF	01/04/16	31/03/18	20,000
4	NURUL ASYIKIN MD ZAKI	FOSTERING TEACHING AND LEARNING OF CHEMICAL ENGINEERING COURSES THROUGH FLIPPED CLASSROOM APPROACH	ARAS	UITM	AKTIF	01/07/16	30/06/18	20,000
5	NURUL ASYIKIN MD ZAKI	THERMOBIOLOGICAL COMPATIBILITY OF ANTIGLYCEMIC ALPHA-GLUCOSIDASE AND ALPHA-AMYLASE INHIBITORS FROM AQUILARIA SPP. DRIED LEAVES	RAGS	KPT	TAMAT	15/12/12	14/06/15	80,000
6	NURUL ASYIKIN MD ZAKI	INVESTIGATION ON MIXING AND SEGREGATION MECHANISM OF PARTICLES AND MIXING QUALITIES BY USING LOW COST IMAGE ANALYSER	RIF	UITM	TAMAT	01/06/12	30/05/14	32,000
7	SITI FATMA ABD KARIM	IMPROVEMENT OF PROCESS QUALITY VIA INTEGRATION OF STATISTICAL PROCESS CONTROL (SPC) AND ENGINEERING PROCESS CONTROL (EPC)WITH SUPPORT FROM MINITAB AND MATLAB. (A CASE STUDY: CHEMICAL INDUSTRY)	RAGS	KPT	AKTIF	12/01/15	30/11/2017	53,000
8	DR SITI NOOR SUZILA MAQSOOD UL HAQUE	SUSPENSION EQUILIBRIUM AND DRYING RATE OF DAIRY FRUIT FIBER PRODUCTS IN A SPRAY	RAGS	KPT	TAMAT	01/12/14	31/05/17	80,000
9	NOR KHAIZAN ANUAR	Superabsorbent Hibiscus Rosa Sinensis-Pectin Hydrogel: Mechanism of Wound Healing	RAGS	KPT	TAMAT	2013	2015	80 000
10	NOR KHAIZAN ANUAR	Deciphering the Mechanism of Transdermal Drug Permeation Enhancement by Hibiscus Rosa-Sinensis Mucilage	FRGS	KPT	AKTIF	2016	2018	92 000
11	HABSAH ALWI	ANTYPYRETIC PROPERTIES FROM MALAYSIAN AGARWOOD LEAVES	FRGS	KPT	TAMAT	15/112013	31/5/2017	92,000
12	SITI NOOR SUZILA MAQSOOD UL HAQUE	DEVELOPMENT OF BIODEGRADABLE FOOD PACKAGING FROM AGRICULTURAL AND PHARMACEUTICAL WASTE	BESTARI	UITM	AKTIF	2017	2019	50,000
<b>JUMLAH TERKUMPUL</b>								<b>479,000</b>

# Postgraduates (Research)

BI L	NAMA PENYELIA	STATUS PENYELIAAN	NAMA PELAJAR	FAKULTI	TAHUN KEMAS UKAN	TAHUN TAMAT PENGA JIAN	PERINGK AT PENGAJI AN	KOD PROGRA M
1	Nor Khaizan Anuar	Penyelia utama	Nur Karimah binti Aziz	Farmasi	2014	Ongoing	MSc (Pharmaceutics)	PH764
2	Nor Khaizan Anuar	Penyelia utama	Nor Maziah binti Saidin	Farmasi	2017	Ongoing	MSc (Pharmaceutics)	PH764
3	Habsah Alwi	Penyelia kedua	Siti Khairun Nissa' Afiffudden	FKK	2014	2017	Sarjana	EH750
4	Siti Noor Suzila Maqsood ul Haque	Penyelia Utama	Nur Assyiqah Syuhada Bt Mohamad Asri	FKK	2017	Ongoing	MSc (Chemical Eng)	EH750
5	Siti Fatma Abd Karim	Penyelia kedua	Nuramalina Hamzah	FKK	2016	Ongoing	Sarjana	EH750



# Niche Area and Relevance of RIG (FOOD PROCESS ENGINEERING & PRESERVATION)

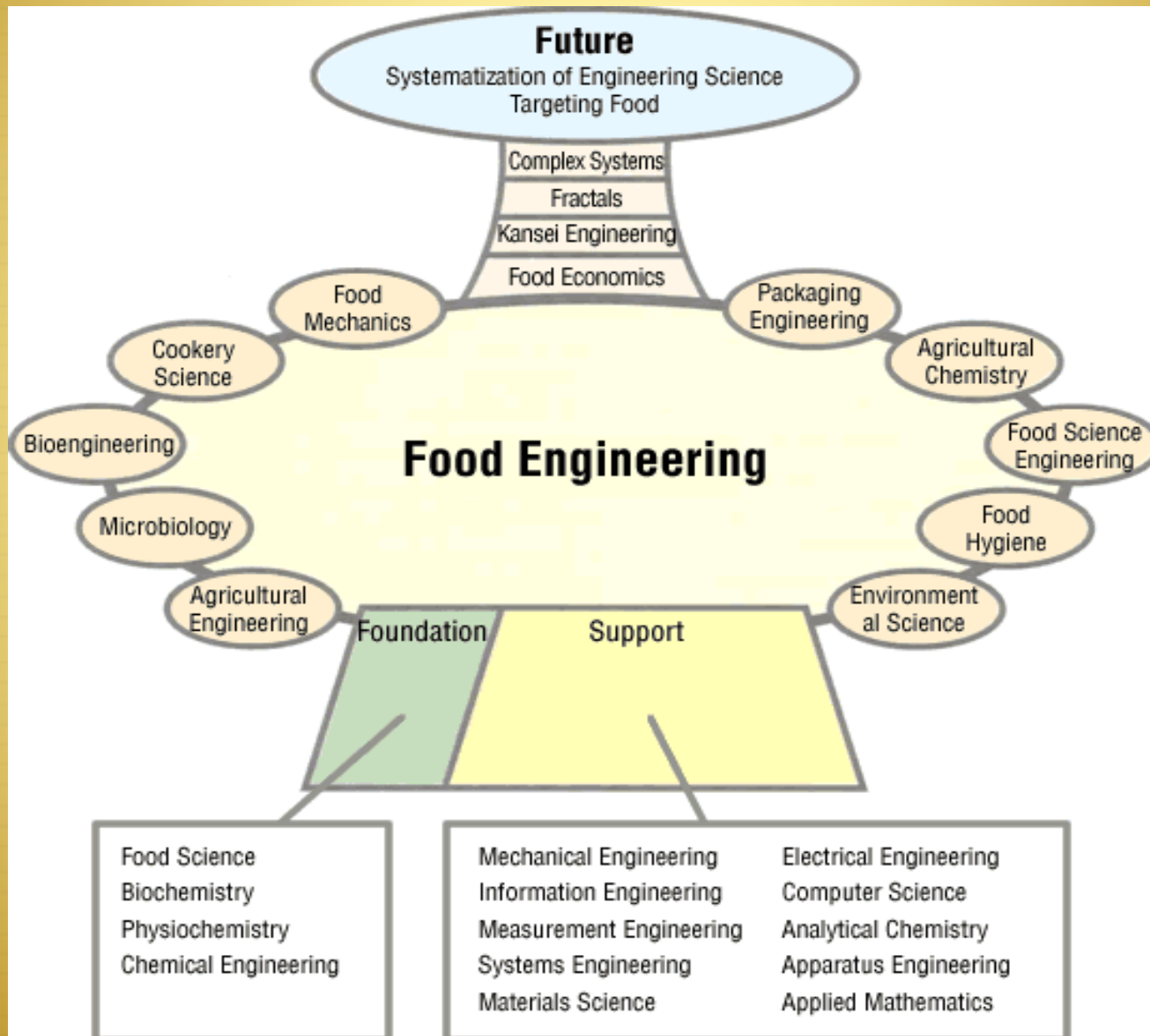
Food engineering is a multidisciplinary field of applied physical science which combines science, microbiology, and engineering education for food and related industries

It is a technical discipline involved in food manufacturing and processing . It process raw material into finished products.

Physics, chemistry, and mathematics are fundamental to understanding in engineering products and operations in the food industry.



# Areas of Food Engineering



# Research in Food Engineering

**Food production systems**

**Package sealing methods**

**Process automation**

**Food product shelf life and quality**

**Microencapsulation**

**Extrusion**

**Edible films and costing**





# Food Engineering Inventions



Bread slicer

Drying machine

Carbonated Water



Microwave oven

Refrigerator

Potato chips

Can and can opener



# Current Food RIG in UiTM



**FUNCTIONAL FOODS  
RESEARCH GROUP**

**(Prof Noriham, Fakulti  
Sains Gunaan)**

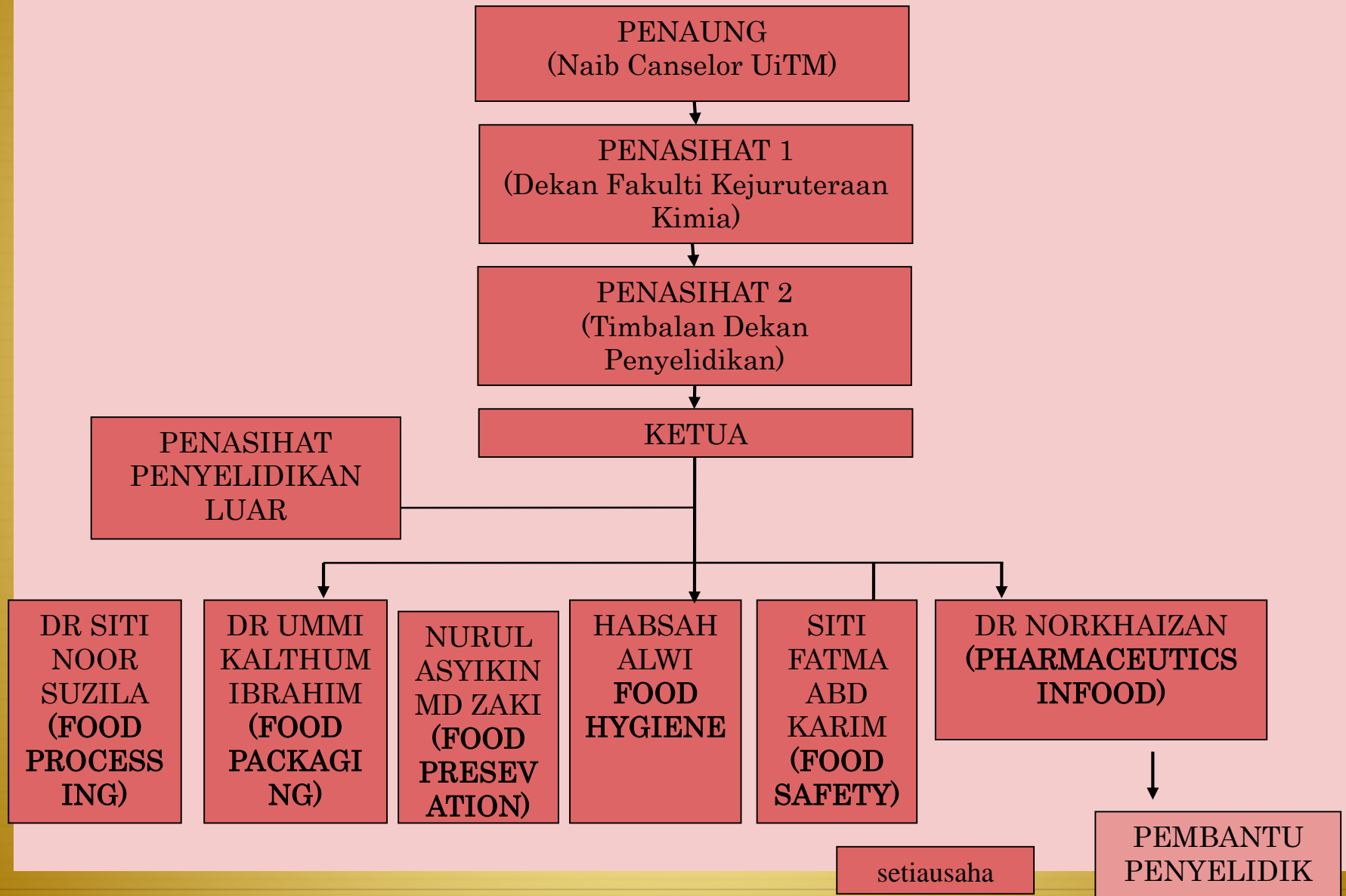
**FATS & OIL CHEMISTRY**

**(Dr Norizzah, Fakulti Sains  
Gunaan)**

**FOOD PROCESS & ENGINEERING  
RESEARCH GROUP**

**(Fakulti Kejuruteraan Kimia)**

# Organizational Chart





# RIG Research Roadmap

(5/10 yrs)

